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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/694,730	10/29/2003	Hoang T. Tran	1875.4530000	4012
26111	7590	01/28/2008		
STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C. 1100 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			EXAMINER RADOSEVICH, STEVEN D	
			ART UNIT 2117	PAPER NUMBER
			MAIL DATE 01/28/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/694,730

Applicant(s)

TRAN ET AL.

Examiner

Steven D. Radosevich

Art Unit

2117

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 15-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 10/31/07.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

Claims 1-19 are present within this instant examination. Applicant's election without traverse of claims 1-14 in the reply filed on 10/31/2007 is acknowledged. Therefore claims 15-19 will not be given further consideration within this instant examination since they were not elected.

#### ***Priority***

Acknowledgment is made that priority is claimed to provisional application 60/421780 filed on 10/29/2002, and as such is the date used within this instant examination.

#### ***Information Disclosure Statement***

Acknowledgment is made that an Information Disclosure Statement (IDS) was filed prior to this examination and as such the contents of the IDS has been fully considered and reviewed.

#### ***Drawings***

The drawings do not appear to have any issues at this time that would require an objection and/or correction/replacement by the applicant. Therefore the drawings are accepted at this time.

#### ***Claim Objections***

Claim 8 is objected to because of the following informalities:

The wording "of a data signal and a clock signal" should be replaced with "of a data signal or a clock signal" so as to correctly indicated the programmable IO receives or sends either but not both as is believed to be the intent of the claim since the claim

reads "said programmable IO pad is programmable to receive or send at least one" not both.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 14 recites the limitations "said multiple parallel ports" and "said multiple serial ports" in lines 3-4 of the claim. There is insufficient antecedent basis for this limitation in the claim. Examiner notes that none of the claims contain any reference to multiple parallel or serial ports.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over 3Com ("Etherlink III ISA Network Interface Card User Guide).

1. As per claim 1, 3Com substantially teaches a transceiver, comprising:

A plurality of pads (figure 1-2: the vertical contacts on the 3C509B NIC as is well known), wherein at least one of said plurality of pads is a programmable IO pad capable of supporting at least two data protocols and at least two electrical specifications (RJ-45, AUI, and/or BNC in figure 1-1 and table 1-1, and pages 82-83), wherein at least one of said plurality of pads is a programmable MDIO pad capable of supporting at least two data protocols (RJ-45, AUI, and/or BNC in figure 1-1 and table 1-1) and at least two electrical specifications; and

A plurality of ports (RJ-45, AUI, and/or BNC in figure 1-1 and table 1-1) in communication with said plurality of pads (figure 1-2: the vertical contacts on the 3C509B NIC as is well known), wherein one of said plurality of ports is a parallel (AUI) port in communication with said programmable IO pad.

3Com does not specifically teach wherein at least one of said plurality of pads is a programmable IO pad capable of supporting at least two data protocols and at least two electrical specifications, and wherein at least one of said plurality of pads is a programmable MDIO pad capable of supporting at least two data protocols and at least two electrical specifications.

However those of ordinary skill within the art at the time the invention was made would recognize that each of the ports (AUI, RJ-45, and BNC, also pages 81-83) supports different protocols and specifications required to operate and connect with

each port is well known. Furthermore those of ordinary skill within the art at the time the invention was made would recognize that programming the pads of the 3C509B NIC or any network interface supporting a number of different ports (known as a "combo" in that art) for supporting the communication between whichever port is activated and the device it is connected to is well known.

Therefore one of ordinary skill within the art at the time the invention was made could have been motivated to modify 3Com to have each of the plurality of ports support different protocols and specifications since each is a different electrical connection, with its own unique specific protocols and specifications required for operations. Furthermore one of ordinary skill within the art at the time the invention was made could have been motivated to further modify 3Com to have the at least one programmable IO pad and MDIO pad supporting at least two of the different protocols and specifications of the different ports to allow connection with the device in which it is inserted by way of the standard contact points regardless of which port is activated/utilized.

2. As per claim 2, 3Com teaches wherein said data protocols and electrical specifications comprise the standards specified in IEEE 802.3 clauses 45 and 22 (IEEE 802.3 on page 81 and 83)

3. As per claim 3, 3Com teaches the as described above in detail plurality of pads and ports.

3Com does not specifically teach wherein the protocols include at least two of XGMII, TBI, and RTBI and wherein said electrical specifications include at least two of HSTL, SSTL, and LVTTTL.

However those of ordinary skill within the art at the time the invention was made would recognize that any standard protocol and electrical specification including XGMII, TBI, RTBI, HSTL, SSTL, and LVTTTL supported by any port(s) used within a combo is well known.

Therefore one of ordinary skill within the art at the time the invention was made could have been motivated to modify 3Com so that the data protocols include at least two of XGMII, TBI, and RTBI, and the electrical specifications include at least two of HSTL, SSTL, and LVTTTL since there exist a number of ports and these are standard, reliable, and proven protocols and electrical specifications supported by ports used within communication systems.

4. As per claims 4-6, 3Com teaches the as described above in detail plurality of pads and ports.

3Com does not specifically teach a bus structure for separating a power connection of said programmable MDIO pad from a power connection of said programmable IO pad.

However those of ordinary skill within the art at the time the invention was made would recognize that a bus structure for separating the power connections of two or more electrical components is well known.

Therefore one of ordinary skill within the art at the time the invention was made could have been motivated to have a bus structure for separating a power connection of said programmable MDIO pad from a power connection of said programmable IO pad since the electrical, physical, and/or chemical properties of the bus can eliminate

undesired interaction between the power connection of these different electrical components. Examiner notes the art is replete with references wherein the electrical, physical, and/or chemical properties of electrical components within devices are closely observed in light of the trend of ever shrinking electrical devices (with respect to device size, space between components, and the number of components per unit area).

5. As per claim 7, 3Com teaches the as described above in detail plurality of pads and ports.

3Com does not specifically teach wherein said programmable IO pad is programmable to operate as an input or an output.

However those of ordinary skill within the art would recognize that a programmable IO pad being programmable to operate as an input or an output is well known.

Therefore one of ordinary skill within the art at the time the invention was made could have been motivated to have the programmable IO pad within 3Com be selectively programmable to operate as an input or an output to facilitate the required connection configuration dependent upon which port is activated/utilized.

6. As per claim 8, 3Com teaches the as described above in detail plurality of pads and ports.

3Com does not specifically teach wherein said programmable IO pad is programmable to receive or send at least one of a data signal or a clock signal.



However those of ordinary skill within the art would recognize that a programmable IO pad being programmable to receive or send at least one of a data signal or a clock signal is well known.

Therefore one of ordinary skill within the art at the time the invention was made could have been motivated to have the IO pad within 3Com be selectively programmable to receive or send at least one of a data signal or a clock signal to facilitate the required connection configuration dependent upon which port is activated/utilized.

7. As per claims 9 and 10, 3Com teaches wherein one at least of said plurality is ports is a serial port in communication with said programmable IO pad (AUI port).

8. As per claim 11, 3Com teaches further comprising a bus connecting said parallel port to said serial port on a common substrate with said plurality of ports (combo and NIC with the vertical contacts on an NIC as is well known).

9. As per claims 12 and 13, 3Com teaches further wherein said bus is configured to have a ring shape around a logic core (circuitry of the NIC).

10. As per claim 14, 3Com teaches the as described above in detail plurality of pads and ports.

3Com does not specifically teach further comprising a packet bit error rate tester (BERT) connected to said bus, said packet BERT able to determine bit error rates of at least one of said multiple parallel ports and said multiple serial ports.

However those of ordinary skill within the art at the time the invention was made would recognize that a packet BERT able to determine bit error rates of any of the ports is well known.

Therefore one of ordinary skill within the art at the time the invention was made could have been motivated to modify 3Com so as to have a packet BERT to determine bit error rates of any of the ports so as to enable testing as to the functionality of the ports themselves, the NIC itself, and/or the integrity of any and all signals that would with high bit error rates otherwise being into question the functionality of the NIC and/or the ports themselves.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- i. IEEE 100, disclose the definition of a transceiver as: (a) a device that both transmits and receives data, (b) a device that connects a host interface to a network, (c) a device that applies electrical signal to the cable and may sense collisions; also references the IEEE 802.3 standard in its entirety.
- ii. Rabinovich (U.S. Patent 6880078 B2) discloses XAUI, transceiver, and IEEE 802.3.
- iii. Williams (U.S. Patent 6859825 B1) discloses MDIO, IEEE 802.3, and multiple PHY connections.

- iv. Conley et al (U.S. Patent 7080162 B2) discloses IEEE 802.3, MDIO, and PHY.
- v. Oliphant et al (U.S. Publication 20020019173 A1) discloses BNC and RJ-XX (45, 11, etc.) connection useable together within a communications card.
- vi. Homann (U.S. Publication 20010009553 A10 discloses AUI, MII, TBI, and GMII (figure 1), transceivers, and IEEE 802.3.
- vii. Barker et al (U.S. 20020157030 A1) discloses additional known interfaces (AUI, GMII, DMI, MII, and PMI) and also some IEEE 802.3 specifications (10BaseT and 100BaseTx).
- viii. Dube' et al (U.S. patent 6434157 B1) discloses a number of combo slots (see figures 7 and 8 and IEEE 802.3.
- ix. Laity et al (U.S. 6183307 B1) discloses BNC/COAX, D-sub, USB, and mini-DIN a adapters usable together within a information transfer system along with RJ-XX.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Radosevich whose telephone number is 571-272-2745. The examiner can normally be reached on 9am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jacques H. Louis can be reached on 571-272-6962. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

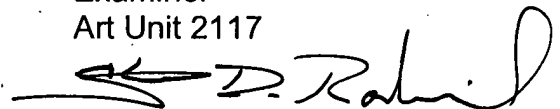
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/Cynthia Britt/  
Primary Examiner  
AU 2117 1/23/08

Steven D. Radosevich  
Examiner  
Art Unit 2117

A handwritten signature in black ink, appearing to read "S. D. Radosevich", with a stylized flourish at the end.